



SHERMAN ISLAND MAYBERRY FARMS WETLANDS SUBSIDENCE REVERSAL AND CARBON SEQUESTRATION PROJECT

Western Delta

TIDAL MARSH, SHADED AQUATIC RIVERINE, AND UPLAND HABITATS

The Mayberry Farms Subsidence Reversal and Carbon Sequestration Project is a permanently flooded wetland on a 307-acre parcel on Sherman Island that is owned by the California Department of Water Resources (DWR). The project has restored approximately 192 acres of emergent wetlands and enhanced approximately 115 acres of seasonally flooded wetlands.

The Mayberry Farms project was conceived as a demonstration project that provides subsidence reversal benefits and develops knowledge that can be used by operators of private wetlands, including “duck clubs,” which manage lands for waterfowl-based recreation. By maintaining permanent water, the growth and subsequent decomposition of emergent vegetation is expected to control and reverse subsidence. The project is also anticipated to provide climate benefits by sequestering atmospheric carbon dioxide. The project has demonstrated, through water quality sampling and wildlife survey data, that it provides year-round wetland habitat for waterfowl and other wildlife.

Construction occurred in summer 2010 and had a total cost of \$1.6 million. Several projects at the site are currently ongoing and performed routinely by DWR. DWR is also collaborating with UC Berkeley researchers to collect Greenhouse Gas data that will be used to develop a Wetland Protocol for Carbon Sequestration in cooperation with the California Air Resources Board Cap and Trade Program. In addition, DWR is working with researchers from the Moss Landing Laboratory and the Central Valley Regional Water Board to monitor Methyl Mercury (MeHg) levels and test Best Management Practices to control MeHg in a permanently flooded and managed wetland.

RESTORATION TOTALS

307 acres total:

- ▶ 192 acres of emergent wetlands
- ▶ 115 acres of seasonally flooded wetlands

OBJECTIVES

- ▶ Control and reverse subsidence on a 307-acre property on Sherman Island using permanent flooding techniques.
- ▶ Determine amount of carbon sequestered for the project.
- ▶ Study waterfowl use and waterfowl hunting success on permanently flooded Delta wetlands.
- ▶ Demonstrate the applicability of tested management practices to the Delta and Suisun Marsh.

LANDOWNER

Reclamation District 341 (Sherman Island) and DWR

FUNDING

- ▶ Planning, Design, and Construction - Proposition 84
- ▶ Operations and Maintenance – Prop 84, 1E, and State Water Project contractors



TIMELINE

- ▶ Develop restoration design - 2007
- ▶ Environmental permitting - 2008 - 2009
- ▶ Project Construction and restoration - Spring/ Summer 2010
- ▶ Complete monitoring plan/initiate - Summer 2010
- ▶ Project implementation: flooding and monitoring - Fall 2010
- ▶ Carbon measurements, water quality sampling, surveys - 2010 - 2017
- ▶ Project completed in 2010

PROJECT PROPONENT

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